CONTENTS OF *AQUACULTURE*, VOLUME 80

VOL. 80 NOS. 1/2 AUGUST 1989

Genetics and Breeding

Heritability of growth in larvae and juveniles of *Mytilus edulis*
T. Strömgren and M.V. Nielsen (Trondheim, Norway) 1

Body traits in rainbow trout. I. Phenotypic means and standard deviations and sex effects
B. Gjerde (Ås, Norway) 7

Body traits in rainbow trout. II. Estimates of heritabilities and of phenotypic and genetic correlations
B. Gjerde (Ås, Norway) and L.R. Schaeffer (Guelph, Ont., Canada) 25

Husbandry and Management

Environmental influences on growth and survival during the ocean-nursery rearing of giant clams, *Tridacna gigas* (L.)
J.S. Lucas, W.J. Nash, C.M. Crawford and R.D. Braley (Townsville, Qld., Australia) 45

Water quality conditions and particulate chlorophyll *a* of new intensive seawater fishponds in Eilat, Israel: daily and diel variations
A. Neori (Eilat, Israel), M.D. Krom (Haifa, Israel), I. Cohen and H. Gordin (Eilat, Israel) 63

Observations on the growth of juvenile Atlantic halibut (*Hippoglossus hippoglossus* L.) in captivity
T. Haug (Tromsø, Norway), I. Huse (Storebø, Norway), E. Kjørsvik (Tromsø, Norway) and H. Rabben (Storebø, Norway) 79

Nutrition

Effect of storage temperature on the quality of diets for the prawn, *Penaeus monodon* Fabricius
M.C. de la Cruz, G. Erazo and M.N. Bautista (Iloilo, The Philippines) 87

Influence du régime alimentaire sur la reproduction en captivité de *Penaeus vannamei* et *Penaeus stylirostris* (Diets in relation to reproduction of *Penaeus vannamei* and *Penaeus stylirostris* in captivity)
M.-L. Galgani (Marseille, France) and AQUACOP (J. Goguenheim, F. Galgani and G. Cuzon) (Tahiti, French Polynesia) 97

First feeding of marine fish larvae: are free animo acids the source of energy?
H.J. Fyhn (Bergen, Norway) 111

Effect of dietary protein level and amount of plant ingredient (*Phaseolus aureus*) incorporated into the diets on consumption, growth performance and carcass composition in *Oreochromis niloticus* (L.) fry
S.S. de Silva and R.M. Gunasekera (Matara, Sri Lanka) 121

The use of fish silage as an ingredient for eel fingerling nutrition
J.F. Gonçalves, S. Santos, V.S. Pereira (Porto, Portugal), I. Baptista (Lisbon, Portugal) and J. Coimbra (Porto, Portugal) 135

Growth and feed efficiency of white sturgeon (*Acipenser transmontanus*) sub-yearlings at different feeding rates
S.S.O. Hung, P.B. Lutes, F.S. Conte and T. Storebakken (Davis, CA, U.S.A.) 147

Effect of supplemental phytate and/or tricalcium phosphate on weight gain, feed efficiency and zinc content in vertebrae of channel catfish
S. Satoh, W.E. Poe and R.P. Wilson (Mississippi State, MS, U.S.A.) 155

Effect of oxolonic acid on fecal microflora of goldfish (*Carassius auratus*)
H. Sugita, C. Miyajima, M. Fukumoto, H. Koyama and Y. Deguchi (Tokyo, Japan) 163

Physiology and Endocrinology

Effects of metformin on plasma insulin, glucose metabolism and protein synthesis in the common carp (*Cyprinus carpio* L.)
Y. Hertz (Rehovot, Israel), N. Epstein (Ness-Ziona, Israel), M. Abraham (Jerusalem, Israel), Z. Madar (Rehovot, Israel), B. Hepher (Dor, Israel) and A. Gertler (Rehovot, Israel) 175

Technical Papers

Prelimilary results of feeding aquatic macrophytes to *Penaeus monodon* juveniles
J. Honculada Primavera and R.Q. Gacutan (Iloilo City, The Philippines) 189

Evaluation of edge seining for harvesting *Oreochromis niloticus* fry from spawning ponds
M.C. Verdegem (Wageningen, The Netherlands) and A.S. McGinty (Mayagüez, PR, U.S.A.) 195

VOL. 80 NOS. 3/4 — 1 SEPTEMBER 1989

Diseases, Parasites and Predators

The effects of *Vibrio anguillarum* extracellular products on Japanese eels
M.C. De la Cruz (Iloilo City, The Philippines) and K. Muroga (Fukuyama, Japan) 201

Loma salmonae (Protozoa: Microspora) infections in seawater reared coho salmon *Oncorhynchus kisutch*
M.L. Kent (Nanaimo, B.C., Canada), D.G. Elliott (Seattle, WA, U.S.A.), J.M. Groff and R.P. Hedrick (Davis, CA, U.S.A.) 211

Lower prevalence of fin erosin in mature than in immature Atlantic salmon (*Salmo salar*) parr
J. Mork, T. Järvi and L.P. Hansen (Trondheim, Norway) 223

Genetics and Breeding

Application of an electrophoretically detectable genetic marker to ploidy testing in brown trout (*Salmo trutta* L.) triploidised by heat shock
W.W. Crozier and J.J. Moffett (Coleraine, N. Ireland) 231

Husbandry and Management

The effect of stress on spawning of brood fish and survival of larvae of the rabbitfish, *Siganus guttatus* (Bloch)
F.G. Ayson (Iloilo City, The Philippines) 241

Production of Florida red tilapia in seawater pools: nursery rearing with chicken manure and growout with prepared feed
D.H. Ernst, L.J. Ellingson (Sopchoppy, FL, U.S.A.), B.L. Olla (Newport, OR, U.S.A.), R.I. Wicklund (Riviera Beach, FL, U.S.A.), W.O. Watanabe (Sopchoppy, FL, U.S.A.) and J.J. Grover (Newport, OR, U.S.A.) 247

Nutrition

Starch as an energy source in feed for cod (*Gadus morhua*): digestibility and retention
G.-I. Hemre, Ø. Lie, E. Lied and G. Lambertsen (Bergen, Norway) 261

The dietary protein requirements of young tilapia and an evaluation of the least cost dietary protein levels
S.S. de Silva, R.M. Gunasekera and D. Atapattu (Matara, Sri Lanka) 271
The amino acid and fatty acid compositions of selected tissues of the dolphin fish (*Coryphaena hippurus*) and their nutritional implications
A.C. Ostrowski and S. Divakaran (Waimanalo, HI, U.S.A.) 285
Role of dietary ascorbic acid in vitellogenesis in rainbow trout (*Salmo gairdneri*)
R. Waagbø, T. Thorsen and K. Sandnes (Bergen, Norway) 301

Physiology and Endocrinology
Time pattern analysis of swimming activity and heart rate under the influence of chloramphenicol in carp (*Cyprinus carpio* L.) and rainbow trout (*Salmo gairdneri* R.)
M. Reide and R. Siegmund (Berlin, German Democratic Republic) 315
Social control of growth in *Macrobrachium rosenbergii*. I. The effect of claw ablation on survival and growth of communally raised prawns
I. Karplus, E. Samsonov, G. Hulata and A. Milstein (Hof Hacarmel, Israel) 325
Feminization of *Oreochromis mossambicus* by the administration of diethylstilbestrol
K. Varadaraj (Madurai, India) 337
Gametogenesis of the European flat oyster (*Ostrea edulis*) and Pacific oyster (*Crassostrea gigas*) in warm water in Israel
M. Shpigel (Eilat, Israel) 343
Etude du développement larvaire de l'éperlan, *Osmerus mordax*, en eau pure et dans deux milieux de matière organique, le glucose et l'acétate (A study of the larval development of smelt, *Osmerus mordax*, in pure water and in two organic media, glucose and acetate)
D. Bédard and L.-M. Lalancette (Chicoutimi, Que., Canada) 351

Short Communication
Dietary administration of an LHRH analogue induces spawning of spotted seatrout (*Cynoscion nebulosus*)
P. Thomas and N.W. Boyd (Port Aransas, TX, U.S.A.) 363

Technical Paper
Fatty acid analysis of fish eggs without solvent extraction
S. Divakaran and A.C. Ostrowski (Waimanalo, HI, U.S.A.) 371

Book Reviews
Nutrition of pond fishes 377
Fish physiology and parasitology 378
The provident sea 379
Carp farming 380
The huchen 381

Publisher's Acknowledgement 383

Announcement 384

Author Index 385

Contents of *Aquaculture*, Volume 80 389